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SHORT ARTICLE

# A multilevel threshold public good perspective on place branding: evidence from Italy

Margherita Bellanca [a] and Vieri Calogero [b]

**ABSTRACT**
This paper proposes a new interpretation of place brand as a multilevel threshold public good (MTPG) produced by the interaction of narratives from different geographical levels. Using an original dataset of Google trends and tweets from Italian provinces and regions, we test the hypothesis that place branding has a multilevel structure. We further test the MTPG framework applied to place branding, showing that place branding is influenced by different geographical levels which can trigger a spillover in terms of attractiveness if they contribute to crossing a threshold point. The results confirm the presence of a provision point in place branding, showing that the proposed MTPG framework fits the phenomenon. This article contributes to the literature on place branding and brands by providing a new lens through which to interpret the phenomenon, which may be useful for a better understanding and measuring of the interaction of branding strategies operating at different spatial scales.

## 1. INTRODUCTION

Over the past 30 years, cities have been overwhelmed by global processes that have fostered increased flows of goods, people and resources. In a context of competition among territories to attract increasingly mobile economic factors, place branding has become one of the most important tools for facing these new challenges. This concept extends the idea of marketing to the promotion of places with the goal of attracting tourists, investment, inhabitants or market flows. Italy is a naturally tourism-oriented country with widespread cultural, artistic and landscape heritage. Tourism contributes between 6% and 13% of gross domestic product (GDP), but the concentration of tourism at the local level varies enormously: Rome accounts for 97% of regional tourism and Venice 57%, while in other regions tourism is widespread (Bronzini et al., 2022).

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Moreover, the effect of tourism on local growth is positive for areas with low value added and low employment, while it is zero for areas that are already heavily touristed. In this context, place branding could be a strategic instrument for recalibrating Italian tourism flows to favour less developed areas.

A virtuous example of place branding policies in Italy has been the project of Matera's candidacy as European Capital of Culture in 2019. This initiative has resulted in a significant transformation of Matera's image and a remarkable increase in tourist arrivals. Tourism growth in Matera radically accelerated in 2014, from an annual growth rate of about 16% in the previous period (2009–14) to 31% thereafter (2014–19) (Padula, 2021). However, this is not always the case: while sometimes large-scale projects and place branding campaigns have an extraordinary impact on the perception of a city, in other occasions they may be ineffective. In this article, we ask under what conditions place branding succeeds in creating new intangible assets and increasing attractiveness. Furthermore, we want to understand how different geographical levels interact in terms of their contribution to place branding and the unfolding of benefits. The central idea of this analysis is that place brands are produced through place narratives once these become collectively shared. To achieve this, the place branding strategy must reflect the story, expectations and imaginaries of a place. In this way, and supported by the spread of social media, place storytelling can transform into a collective and dynamic process that generates new collective meanings the consequences of which are locally non-excludable and non-rivalrous.

Therefore, we propose to interpret place brands as threshold public goods (TPGs) – characterised by non-rivalry, non-excludability and the presence of a provision point. Adopting this perspective, we predict that the impacts of place brand provision will only manifest once a specific threshold is reached. We additionally consider the multilevel nature of place branding, whereby place brand provision at one geographical level can trigger the provision of the public good at another level, creating spillovers between geographical entities. We hence propose a new concept of multilevel threshold public good (MTPG), which is produced by the interaction of narratives from different geographical levels that contribute to exceeding the threshold value. To test this interpretation, we analyse the impact of place branding on tourist attractiveness, measured by tourist arrivals, considering a panel dataset covering Italian provinces and regions from 2010 to 2019. We employ a Poisson regression model to test the presence of a nonlinear, multilevel relationship between place branding and attractiveness. Our explanatory variables encompass regional and provincial branding, proxied through an original dataset of Google trends and tweets. Moreover, through a threshold regression model (Hansen, 1999), we test whether the MTPG framework can be applied to place branding, showing that the provision of place branding at the provincial level can trigger spillover effects in terms of attractiveness for the whole region when a certain threshold is exceeded, and that regional place branding has positive effects on provincial attractiveness.

This paper proposes several innovative perspectives on place branding: (1) to the best of our knowledge, this study is the first that empirically quantifies the impact of place branding on attractiveness; (2) it provides a new digital media-based proxy for measuring the strength of narratives that constitute place branding; (3) the proposed MTPG framework represents a new approach not only in the branding and geography literature, but also in the economics and social science literature more generally; and (4) it enriches the literature on networked and nested place branding (Andéhn & Zenker, 2015) by providing a theoretical framework and methodology for identifying and measuring the different mechanisms through which place branding produces spillovers on attractiveness. This knowledge can provide useful insights for the design of place branding strategies, especially to strengthen the attractiveness of inner areas and territories, such as southern Italy.

## 2. MATERIALS AND METHODS

### 2.1. Narratives as building blocks of place branding

Over the past two decades, place branding studies have shifted from a normative approach to a cultural one (Ashworth & Kavaratzis, 2009). Anholt (2010) defined place branding as the process of building the brand of a particular place by drawing on its identity and promoting the formation of a positive place image. From this perspective, place branding can be interpreted as an interactive process of collective construction of the meaning of places (Kavaratzis & Kalandides, 2015). Despite these developments, this growing literature has not reached an agreement on the nature of this process. Recent literature is developing on analysing the spatial dynamics and multiscale nature of place branding (Giovanardi, 2015), highlighting the importance of horizontal cooperation, networked approaches (Zenker & Jacobsen, 2015) and citizens' engagement (San Eugenio-Vela et al., 2020). Nevertheless, scholars' criticisms that little theoretical refinement has occurred over the past 20 years have raised 'the need to rethink place branding' (Ashworth et al., 2015), starting with the open question of what constitutes place branding. Recently, attention has focused on the narrative nature of place branding, emphasising how place brands are best thought of as narratives or 'place stories' (Hansen, 2010). This view locates the main resources used for place branding in the overall 'story' of place, which is told by all possible organisations, people, objects and storytelling devices (Ashworth et al., 2015). Place brands are social constructions: their analysis through the narrative approach is useful for their relationship to language and to how people co-create social reality (Lichrou et al., 2017). Furthermore, information and communication technology (ICT) technologies are influencing the dynamic interaction between place identity, experience and images (Govers & Go, 2009).

For place branding, the narrative framework must be enriched with two elements: account for its multi-stakeholder structure and its multilevel nature (Andéhn et al., 2014). Indeed, the construction of place-based narratives occurs through the interaction of a large number of
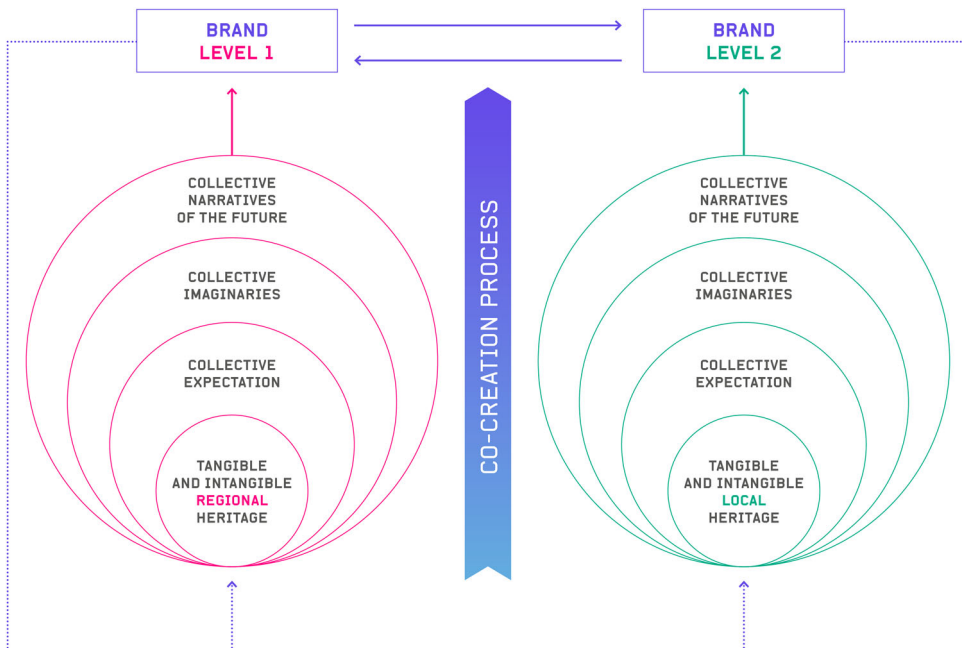


**Figure 1.** The narrative framework.

actors: individuals, organisations, public and private institutions, tourists and travellers (Oliveira & Panyik, 2015). Moreover, place-based narratives influence and are influenced by narratives operating at different geographical levels. Applying the narrative framework of Vignoli et al. (2020) to place branding, narratives perform four functions: (1) different actors select specific local characteristics of the tangible and intangible heritage (selection); (2) give conflicting interpretations of their values and meanings (interpretation); (3) find different causal explanations of story elements (causal modelling); and (4) rationally and emotionally support different behaviours (action support). When narratives become shared and form the image of place (place brand) they succeed in providing causal power. The transition from individual narratives to collective images realise the provision of a public good able to make the place more attractive. The spread of digital media facilitates this transition because it helps transform storytelling into a collective and dynamic process that reinforces members' growing engagement with their community (Pera, 2017). This process of brand co-creation is self-sustaining in a virtuous circle through the interaction of narratives produced at different geographical levels (Figure 1). The positive spillovers between different geographical levels enable the creation of new public goods, corresponding to new collective meanings, which in turn modify tangible and intangible heritage.

## 2.2. A multilevel threshold public goods perspective on place branding

In conceptualising place brands as public goods, characterised by non-rivalry and non-excludability, we highlight the collective effect they bring to the local community. This positive effect is not realised indistinctly: local brands are expected to produce spillover effects and be affected by branding contributions at other geographical levels. In this context, we can consider place brands as a multilevel public good (MPG), which involves the presence of two or more public goods (PG) at different hierarchical level. Different spillover dynamics may be present, having potentially direct consequences on the provision and entity of PG at different scales (e.g., Du & Tang, 2018). For instance, we may be in presence of threshold public goods, characterised by a minimum threshold of contribution or consumption (the provision point) to become non-excludable and non-rival.

Let us consider in particular three different spillover mechanisms between levels, represented through alternative modes of modelling. We will consider a level 1 (such as a region) and a sublevel, or level 2 (such as a province). All mechanisms consider the presence of a particular PG at each level. In level 2 we consider a local PG, which will only be enjoyable by the individual actor in level 2 who invests in it. In level 1, on the other hand, we consider a global PG, so its consequences will be related to all level-2 actors. The mechanisms will differ according to the specific characteristics of the PG considered: whether and when they have a provision point:

- *Mechanism 1: Local PG, global TPG.* In the first spillover mechanism, we consider the presence of a local PG and a global TPG. Each level-2 actor can contribute to its own PG, which will only have local consequences. However, if the sum of different local contributions reaches a certain threshold, this will trigger a global TPG at level 1, which will be enjoyed by all local actors.
- *Mechanism 2: Local TPG, global PG.* In the second mechanism, we consider an opposite dynamic: level-2 actors contribute to a level-1 PG that, given its global characteristics, has consequences for all level-2 actors. Given the supply of the good that the sublevel actors will receive, it could happen that a local TPG is triggered if the local quantity of the good reaches the threshold.
- *Mechanism 3: Local and global TPG.* In the third mechanism, we bring the first two mechanisms together. Indeed, there may be situations where a TPG is present at both levels. In this case, we can have a double feedback dynamic, where if the sum of level-2
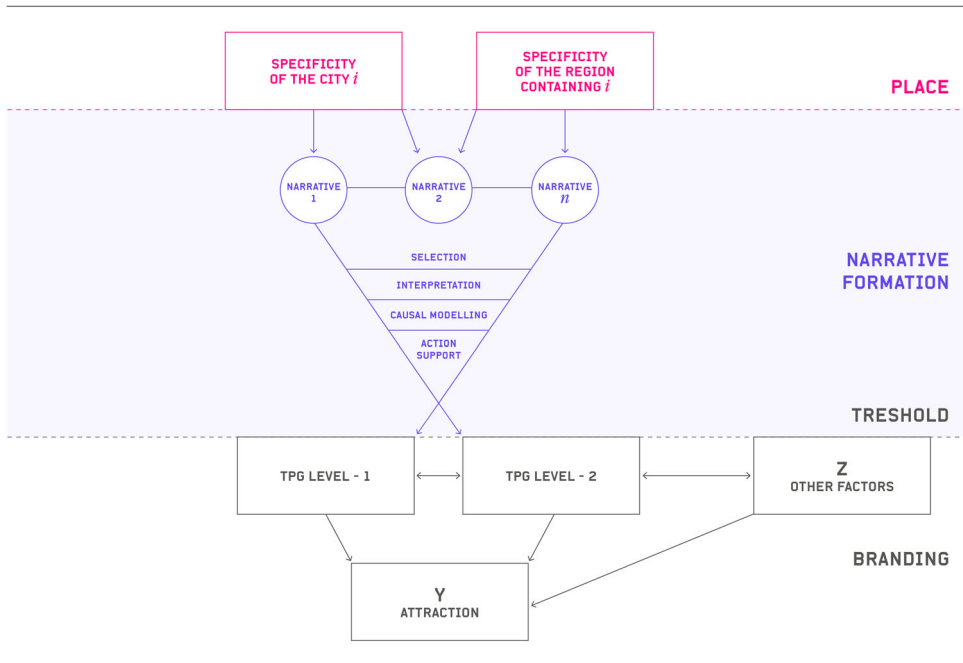
**Figure 2.** The theoretical framework.

contributions reaches a certain threshold, a global PG is activated. Moreover, local PGs have a threshold level in this case, such that if it is reached, a positive spillover effect on the local utility function is triggered.

The three mechanisms sketched in this MTPG framework, although simple and schematic, are meant to capture some possible characteristics of multilevel governance of PG, emphasising the importance of recognising the presence of threshold points that can trigger the provision of goods at different levels how in this sense their provision at one level may influence the provision at a higher or lower level. Figure 2 shows the theoretical scheme just outlined.

Applying the MTPG framework developed here to place branding, we advance two hypotheses based on the previous first two mechanisms (while a different empirical approach needs to be developed for the third mechanism):

*Hypothesis 1: The contribution of provincial branding can have consequences for the entire region if it succeeds in activating a certain threshold in the provision of the level-1 PG.*
*Hypothesis 2: Regional branding may contribute to the activation of provincial brands if a certain threshold is exceeded.*

In the rest of the paper, these hypotheses will be tested using a novel panel dataset introduced in the next section.

## 2.3. Digital data to proxy place narratives

Branding and narratives are not easy to measure. When official statistics are not available, the use of non-traditional data can improve our ability to understand and predict the evolution of complex and new phenomena (Einav & Levin, 2014). Within the literature, place brand

meaning formation is studied through social media text analysis (Andéhn et al., 2014), and the number of Twitter posts is used to measure the strength of narrative-significant observations in the real world (Houghton et al., 2013). However, to the best of our knowledge, there are no indicators based on digital media to measure and analyse place narratives. In this paper, we use two main sources of non-traditional data to construct a proxy of place branding: Google Trends and Twitter. We develop a four-step procedure.

First, as a proxy for consumer interest in places, we use Google Trends related to the name of provinces and regions, which is a daily real-time index of the volume of queries users enter Google. Indeed, Google queries can be useful preliminary indicators of subsequent consumer purchases (Vosen & Schmidt, 2011).

Second, we use Tweets with the hashtag '#place-name' as a proxy for stories involving a place. Twitter data are popular among social scientists also to detect tourism preferences (Chang & Chu, 2013). Tweets with hashtag #place-name may refer to institutional or informal communications by individual citizens or tourists. When a story is particularly interesting, it may be retweeted by many people, or the same hashtag may be used. In both cases, there is an increase in tweets with the specific hashtag. This measure can properly be used as an indicator of the interest generated by stories involving a specific place. What this indicator does not tell us is whether these stories increase the interest in a place or reduce it, or, in the terms of the narrative framework, we do not know whether these stories provide rational and emotional support to concur in the creation of a place brand that increases place attractiveness.

Third, for all these reasons, the interaction between the interest a place generates (number of #place-name) and an indicator that gives us information about the number of future visitors to that place (Google Trends) can give us a raw but reliable indication of the presence of narratives that work in promoting that given place (place-based narrative).

Fourth, as argued in the previous chapters, place-based narratives are the building blocks of place branding, and therefore in the empirical analysis, they are used to investigate the nature and effects of place branding both at the provincial and regional levels:

$$Branding_t = tweets_t \times trends_s \qquad (1)$$

As for aggregating the branding of multiple provinces $i$ belonging to the same region $r$, branding is calculated as the interaction of the average number of tweets and trends:

$$Provincial\_Branding_{rt} = \frac{1}{n}\sum_{i=1}^{n} tweets_{it} \times \frac{1}{n}\sum_{i=1}^{n} trends_{it} \qquad (2)$$

Extracting place-related narratives from Twitter has involved scraping existing official Twitter accounts. The scraping process was guided by a specific taxonomy, whereby a list of pertinent words was selected and manually transformed into hashtags for use as input in the Twitter collector. A customised Python programme using the 'reverse engineering' method was developed to extract publicly available tweets associated with each hashtag. Given the purpose of our analysis, we used the number of Tweets as a variable, relative to each region and province.

We developed a yearly balanced panel dataset based on two different geographical dimensions: provinces (NUTS-3) and regions (NUTS-2). Our dataset covers 17 of the 20 Italian regions, for a total of 87 out of 110 provinces between 2010 and 2019. We use the name of Italian provinces and regions as keywords for the scraping of all the relevant tweets and as input for deriving the Google trends. Figure 3 and Table 1 present the descriptive statistics of our relevant variables: the correspondence between tweets/trends and tourist arrivals is strong in certain areas (e.g., Rome province) but not in highly touristy regions (Venice, Bolzano, Trento). Conversely, regional aggregation offers a quite different perspective, showing a greater relevance of a region
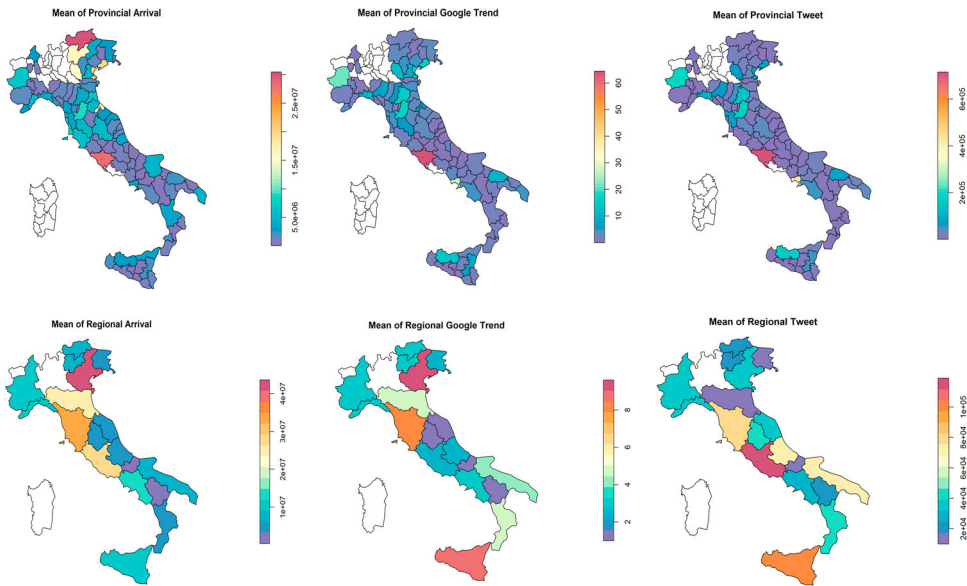
**Figure 3.** Mean values for provinces and regions of the variables of interest.

**Table 1.** Summary statistics of the variables of interest.

| Variable | Observation | Mean | SD | Minimum | Maximum |
|---|---|---|---|---|---|
| Google Trend Province | 870 | 4.417625 | 7.983345 | 0 | 72.16667 |
| Google Trend Region | 170 | 24.22745 | 26.10775 | 1.833333 | 10.58333 |
| Tweet Count Province | 870 | 40,040.74 | 99,911.72 | 11 | 1,082,954 |
| Tweet Count Region | 170 | 45,469.04 | 43,019.16 | 111 | 200,432 |
| Provincial Branding | 870 | 877,390.5 | 5,209,769 | 0 | 6.61e+07 |
| Regional Branding | 170 | 1,341,027 | 2,420,198 | 222 | 1.26e+07 |
| Provincial Branding (aggregated for Regions) | 170 | 307,552.7 | 771,703.2 | 79.25 | 4,657,795 |
| Provincial Arrivals | 870 | 3,502,784 | 5,382,118 | 52,498 | 3.44e+07 |
| Regional Arrivals | 170 | 1.79e+07 | 1.58e+07 | 1,346,769 | 5.56e+07 |

such as Tuscany. For a more detailed description of the variables considered and sources, see in the supplemental data online.

## 2.4. Empirical strategy

The empirical strategy aims to test Hypotheses 1 and 2 developed in the theoretical part using local attractiveness measured by tourist arrivals as a metric of the impact of branding. Two distinct empirical models are employed to assess: (1) the non-linear and multilevel relationship between branding and attractiveness; and (2) the presence of provision points (thresholds) that trigger the multilevel structure, corresponding to the MTPG structure introduced above. We apply these models to test both hypotheses of our setting: the role of provincial branding on the entire region (mechanism 1) and the role of regional branding on single provinces (mechanism 2). Importantly, mechanism 1 analysis should be considered exploratory due to the limited number of regions, and thus needs further confirmation to be robust and generalisable.

The first specification employs a fixed-effect Poisson regression model, considering the count data nature of our dependent variable (*tourist arrivals*). We test for the presence of a non-linear multilevel relationship between branding and attractiveness by including the branding variable in its linear form and its interaction with the branding contribution from the other geographical level. Equation (3) refers to mechanism 1, where regional arrivals are regressed on regional branding and the branding contribution of the provinces within that particular region (see the previous section for details on these two indicators). Similarly, equation (4) tests mechanism 2, considering both provincial and regional branding effects on provincial arrivals, as well as their interaction. These specifications capture the idea that branding can be provided by different geographical levels and explore the potential synergies or trade-offs between branding contribution from different levels.

$$
\begin{aligned}
Regional\_Arrivals_{rt} = \exp\,(&\beta_1 Provincial\_Branding_{r,t-1} + \beta_2 Regional\_Branding_{r,t-1} \\
&+ \beta_3 (Provincial\_Branding_{r,t-1} \times Regional\_Branding_{r,t-1}) + X_{r,t-1}\theta + \alpha_r + \gamma_t)
\end{aligned} \tag{3}
$$

$$
\begin{aligned}
Provincial\_Arrivals_{it} = \exp(&\beta_1 Provincial\_Branding_{(i,t-1)} + \beta_2 Regional\_Branding_{(i,t-1)} \\
&+ \beta_3 (Provincial\_Branding_{(i,t-1)} \times Regional\_Branding_{(i,t-1)}) + X_{i,t-1}\theta + \alpha_i + \gamma_t)
\end{aligned} \tag{4}
$$

where $X_{t-1}\theta$ represents the vector of control variables (gross domestic product (GDP) per capita, institutional quality and population density), $\gamma_t$ is the time fixed-effects, and $\alpha_i$ is the fixed effects at the regional or provincial level according to the different specifications and as specified by the different subscripts ($i$ for the provinces, $r$ for the regions). Including fixed-effects in our regression specification allows us to control for unobserved heterogeneity and time-invariant characteristics of regions/provinces, such as geographical features or cultural characteristics. All independent variables are considered in their lagged specification.

The second empirical specification investigates the presence of a provision point, using a specific model to test and estimate the existence of a threshold in the relationship. We apply Hansen's (1999) panel threshold fixed-effect model to our dataset. This model detects structural break in the relationship between variables, capturing the presence of endogenous threshold effects and estimating their values. Rather than introducing an artificial threshold in the model, this specification identifies points of discontinuity in the variables and tests their statistical significance. Starting from mechanism 2, this model is applied to our setting to estimate whether the provision of a regional public good (brand) can contribute to the creation of the provincial public good and trigger an effect on provincial attractiveness. In our framework, the provision of regional brands can have positive spillovers to the provincial level: when regional branding reaches a certain threshold, it can trigger an effect on provincial branding. We then expect the relationship between provincial branding and province attractiveness to be nonlinear and split into two different regimes, depending on regional branding. To apply this model in a linear context, instead of considering the number of arrivals as the dependent variable, we consider the difference in arrivals between time $t$ and $t-1$. The mechanism can be written as:

$$
\begin{aligned}
(Provincial\_Arrivals_{i,t} &- Provincial\_Arrivals_{i,t-1}) \\
&= \alpha_i + \beta_1 Provincial\_Branding_{i,t-1} + X_{i,t-1}\theta, \;\; if\; Regional\_Branding_{i,t-1} \leq \delta
\end{aligned} \tag{5}
$$

$$
\begin{aligned}
(Provincial\_Arrivals_{i,t} &- Provincial\_Arrivals_{i,t-1}) \\
&= \alpha_i + \beta_2 Provincial\_Branding_{i,t-1} + X_{i,t-1}\theta, \;\; if\; Regional\_Branding_{i,t-1} > \delta
\end{aligned} \tag{6}
$$

where $\delta$ represents the level of the threshold. Introducing a dummy variable in the model, we

can rewrite it through a single expression, as:

$$(Provincial\_Arrivals_{i,t} - Provincial\_Arrivals_{i,t-1}) = \alpha_i + \beta_1 Provincial\_Branding_{i,t-1}$$
$$I\,(Regional\_Branding_{i,t-1} \leq \delta) + \beta_2 Provincial\_Branding_{i,t-1} \qquad (7)$$
$$I\,(Regional\_Branding_{i,t-1} > \delta) + X_{i,t-1}\theta$$

where $\beta_1$ and $\beta_2$ represent the parameters of interest capturing the effect of the branding on the attractiveness below and above the threshold defined on the regional branding respectively. In the same way, we will estimate mechanism 1, expressed by:

$$(Regional\_Arrivals_{r,t} - Regional\_Arrivals_{r,t-1}) = \alpha_i + \beta_1 Regional\_Branding_{r,t-1}$$
$$I\,(Provincial\_Branding_{r,t-1} \leq \delta) + \beta_2 Regional\_Branding_{r,t-1} \qquad (8)$$
$$I\,(Provincial\_Branding_{r,t-1} > \delta) + X_{i,t-1}\theta$$

## 3. RESULTS

Tables 2 and 3 show the results for the Poisson models examining the impact of branding on regional attractiveness (mechanism 1) and provincial attractiveness (mechanism 2). We present results for several specifications, introducing time fixed effects and controls only in some specifications. These models aim to test whether attractiveness can be explained not only by direct branding strategies, but also by the branding contribution of other geographical levels and how these two different levels of contribution interact. The terms measuring the direct effect can be interpreted as the impact of standalone place branding policies that are not connected to the branding network across different spatial scales. By analysing the first mechanism in the specification without controls or time fixed-effect (specification 1, Table 2), we see how the model fails to find a direct positive impact of the sum of provincial branding and regional

**Table 2.** Results for the fixed-effect Poisson models for mechanism 1.

| Variable | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| **Dependent variable: Regional Arrivals** | | | | |
| $Provincial\_Branding_{t-1}$ | −3.31e−05 (0.291) | −4.98e−05 (0.007) | −4.55e−05 (0.053) | −5.13e−05 (0.005) |
| $Regional\_Branding_{t-1}$ | 7.08e−05 (0.082) | −6.07e−05 (0.016) | 2.19e−05 (0.370) | −6.61e−05 (0.002) |
| $Provincial\_Branding_{t-1} \times Regional\_Branding_{t-1}$ | 9.83e−11 (0.068) | 1.16e−10 (0.000) | 1.48e−10 (0.002) | 1.10e−10 (0.001) |
| $GDP\ Per\ capita\ Region_{t-1}$ | | | 15.13524 (0.000) | 1.3237923 (0.707) |
| $Regional\ Institutional\ Quality_{t-1}$ | | | 0.00181444 (0.994) | 0.21801533 (0.114) |
| $Regional\ Population\ Density_{t-1}$ | | | 0.0015549 (0.129) | 0.00131969 (0.047) |
| Province fixed effects | Yes | Yes | Yes | Yes |
| Time fixed effects | No | Yes | No | Yes |
| Number of observation = 153 Number of groups = 17 | | | | |

Note: *p*-values are shown in parentheses.

**Table 3.** Results for the fixed-effect Poisson models for mechanism 2.

| Dependent variable: *Provincial Arrivals* | | | | |
|---|---|---|---|---|
| **Variable** | **(5)** | **(6)** | **(7)** | **(8)** |
| *Provincial_Branding$_{t-1}$* | −4.75e−06 (0.000) | −3.33e−06 (0.000) | −4.94e−06 (0.000) | −3.39e−06 (0.000) |
| *Regional_Branding$_{t-1}$* | 7.91e−05 (0.008) | −4.18e−05 (0.150) | 6.93e−05 (0.018) | −4.44e−05 (0.131) |
| *Provincial_Branding$_{t-1}$ × Regional_Branding$_{t-1}$* | 1.11e−11 (0.000) | 8.14e−12 (0.000) | 1.20e−11 (0.000) | 8.57e−12 (0.000) |
| *GDP Per capita Province$_{t-1}$* | | | 1.0097213 (0.000) | 0.28608082 (0.076) |
| *Province Institutional Quality$_{t-1}$* | | | −0.09797205 (0.236) | −0.0943118 (0.045) |
| *Province Population Density$_{t-1}$* | | | 0.00016448 (0.413) | 0.00001771 (0.888) |
| Province fixed effects | Yes | Yes | Yes | Yes |
| Time fixed effects | No | Yes | No | Yes |
| Number of observation = 783 Number of groups = 87 | | | | |

Note: *p*-values are shown in parentheses.

branding on regional attractiveness, but instead finds a positive and significant impact of the interaction between provincial and regional branding: regional attractiveness is thus influenced by a synergy between branding operating at different geographical levels. By including control variables (specifications 3 and 4, Table 2) and time fixed-effects (specifications 2 and 4, Table 2), the interaction of branding across geographical scales remains significant and positive, while the direct effects are less robust and do not provide conclusive findings. In the second mechanism (Table 3), the presence of possible geographical synergies is even more pronounced: the inter-action term between local and regional branding is highly significant in explaining provincial attractiveness. Adding the control variables (specifications 7 and 8, Table 3), the direct effect of regional branding on provincial attractiveness is not stable and changes sign, while the direct effect of provincial branding remains significant and negative. This result can be interpreted as the presence of branding policies disconnected from the network of local meanings and thus perceived as artificial and detrimental to attractiveness.

The second specification directly examines the presence of a threshold point in brand pro-vision through Hansen's threshold regression model. The results reported in Table 4 provide estimates for the threshold point, examining whether the influence of regional branding on regional attractiveness depends on the branding contribution regime at the provincial level. Table 5 reports the results for mechanism 2, testing if provincial branding is regime dependent on regional branding. The results obtained from the threshold regression model support our hypotheses and suggest the applicability of the MTPG concept to this phenomenon. In both mechanisms, the presence of a significant threshold point is observed. In mechanism 1, the pro-vincial contribution to regional branding strategies leads to the presence of two regimes in influ-encing regional attractiveness (*p*-value of threshold point = 0.013). Below the threshold point, regional branding strategies do not have a significant influence on arrivals to the region. Above the threshold point, instead, regional branding exhibits a positive and significant impact on attractiveness. Similarly, in mechanism 2, the impact of provincial branding on provincial attractiveness is characterised by two regimes that are determined by the contribution of

**Table 4.** Result of equation (8) with respect to the threshold estimation and the threshold regression analysis.

| Threshold variable: *Regional_Branding$_{t-1}$* | | Threshold | | | | [95% CI] | |
|---|---|---|---|---|---|---|---|
| | | **221,461.3281** | | | **209,495.00** | **221,461.3281** | |
| | | **RSS** | **MSE** | | **F-*statistic*** | **Probability** | |
| | | | | | | 0.0050 | |
| **Threshold effect test (bootstrap = 1000)** | | **3.12e+13** | **4.03e+10** | | **63.11** | | |
| **Dependent variable: *Provincial Arrivals* (difference)** | **Coefficient** | **Robust standard error** | t | | P>\|t\| | [95% CI] | |
| *GDP Per Capita Province$_{t-1}$* | 9,731,024 | 956,275.8 | 10.18 | | 0.000 | 7,830,011 | 1.16e+07 |
| *Province Population Density$_{t-1}$* | 1619.985 | 852.5762 | 1.90 | | 0.061 | −74.880 | 3314.85 |
| *Provincial Institutional Quality$_{t-1}$* | 121,692.2 | 183,965.8 | 0.66 | | 0.510 | −244,019.6 | 487,404 |
| *Provincial_Branding$_{t-1}$* | | | | | | | |
| *Regional_Branding$_{t-1}$ ≤ threshold* | −0.0212907 | 0.0091462 | −2.33 | | 0.022 | −0.03947 | −0.00311 |
| *Regional_Branding$_{t-1}$ > threshold* | 0.0108739 | 0.0053915 | 2.02 | | 0.047 | 0.000156 | 0.02160 |
| Constant Term | −638,771.9 | 234,068.7 | −2.73 | | 0.008 | −1,104,085 | −173,458.6 |
| *Fixed-effects (within) regression* | | | | | | | |
| Number of observation = 783 | | | | | | | |
| Number of groups = 87 | | | | | | | |
| Observation per group = 9 | | | | | | | |
| $R^2$: Within = 0.1543 Between = 0.1165 Overall = 0.0575 | | | | | | | |
| F(5,86) = 1697.64 Prob > F = 0.0000 | | | | | | | |

**Table 5.** Result of equation (7) with respect to the threshold estimation and the threshold regression analysis.

| Threshold variable: *Provincial_Branding$_{t-1}$* | | Threshold | | | [95% CI] | |
|---|---|---|---|---|---|---|
| | | 298,453.8438 | | | 295,920.2188 | 318,848.3438 |
| | | RSS | MSE | | F-*statistic* | Probability |
| Threshold effect test (bootstrap = 1000) | | 5.41e+13 | 3.76e +11 | | 20.56 | 0.0130 |
| Dependent variable: *Regional Arrivals* (difference) | Coefficient | Robust standard error | t | P>\|t\| | [95% CI] | |
| GDP per capita Region$_{t-1}$ | 1.06e+08 | 4.90e+07 | 2.17 | 0.046 | 2,213,670 | 2.10e+08 |
| Region Population Density$_{t-1}$ | 27,424.28 | 7048.904 | 3.89 | 0.001 | 12,481.27 | 42,367.29 |
| Regional Institutional Quality$_{t-1}$ | −475,865.7 | 1,870,803 | −0.25 | 0.802 | −4,441,792 | 3,490,060 |
| Regional_Branding$_{t-1}$ | | | | | | |
| Provincial_Branding$_{t-1}$ ≤ threshold | 0.051828 | 0.3163765 | 0.16 | 0.872 | −0.618860 | 0.7225163 |
| Provincial_Branding$_{t-1}$ > threshold | 3.959254 | 0.4903948 | 8.07 | 0.000 | 2.919663 | 4.998844 |
| Constant | −8347498 | 3199665 | −2.61 | 0.019 | −1.51e + 07 | −1564512 |
| Fixed-effects (within) regression | | | | | | |
| Number of observation = 153 | | | | | | |
| Number of groups = 17 | | | | | | |
| Observation per group = 9 | | | | | | |
| $R^2$: Within = 0.1928 Between = 0.0302 Overall = 0.0113 | | | | | | |
| $F(5,16)$ = 38.79 Prob > $F$ = 0.0000 | | | | | | |

regional branding ($p$-value of threshold point = 0.005). In the lower regime, which exists before reaching the threshold, provincial branding has a significant but negative coefficient on tourist arrivals in the province. In contrast, in the upper regime, provincial branding has a positive and significant impact. This result confirms that of Poisson's model, in which provincial branding policies disconnected from other spatial scales may even be detrimental to local attractiveness.

## 4. DISCUSSION

This paper discussed place branding from a new perspective through the interplay between two different literatures: the narrative framework and PG theory. From the latter, we hypothesised that place brands exhibit characteristics of a public good, including the presence of a provision point and spillover effects among different hierarchical geographical levels. Through the narrative framework, we introduced a novel measure of place branding based on digital media and we hypothesised that spillovers, involving place narratives originating from various spatial scales, can contribute to achieving the critical mass (threshold value) required for the provision of the public good. In branding terminology, the interaction between narratives produced at different geographical levels can generate collective narratives with the function of constructing new images of a place. To test these two characteristics of place branding we employ two different empirical specifications using a novel panel of data involving Italian provinces and regions.

The first empirical model tests the influence of multilevel branding strategies on place attractiveness. The results show that place branding is a multilevel phenomenon through which the presence of branding contributions at different geographical levels is essential for increasing both provincial and regional attractiveness. However, the direct effect of local place branding is less clear. This evidence confirms that place brands are formed through the interrelationship of geographical abstractions across different spatial scales (Andéhn & Zenker, 2015). Instead, branding policies disconnected from the network of nested meanings may have a negative impact on place attractiveness.

The second model implemented investigates the existence of a threshold point in the impact of branding over attractiveness, defining the threshold in a multilevel setting. The results confirm our hypothesis and indicate the presence of a provision point in the creation of place brands: the effect of place branding can be triggered and influenced by the branding contribution of other geographical scales, when they exceed a certain threshold value. In this sense, the MTPG framework that we proposed seems to fit the phenomenon.

Our analysis has some limitations that should be acknowledged. First, the use of raw data prevents us from disentangling the contribution of top-down (institutional) place branding from bottom-up place branding. Second, the analysis of our mechanism 1 must be considered exploratory because of the small number of regions. Third, this paper examines only one dimension of the impact of branding (tourism attractiveness), without considering other aspects such as population flows, investment and other market goods. Finally, given the data availability and our empirical strategy, we could only test the first two mechanisms proposed in our theoretical framework.

Despite these limitations, our study offers important insights for scholars and policymakers. The new approach to place branding proposed in this paper shows two key features of this phenomenon, which can open up new evaluations and analyses: its multilevel aspect, which entails synergies and trade-offs among different branding contributions, and its nonlinear structure, described here through a public good characterised by a provision point. From a policy perspective, our results suggest that integrated and networked branding policies should be promoted at multiple levels to maximise positive externalities and not get trapped below possible threshold values.

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## REFERENCES

Andéhn, M., Kazeminia, A., Lucarelli, A., & Sevin, E. (2014). User-generated place brand equity on twitter: The dynamics of brand associations in social media. *Place Branding and Public Diplomacy*, *10*(2), 132–144. https://doi.org/10.1057/pb.2014.8

Andéhn, M., & Zenker, S. (2015). Place branding in systems of place – on the interrelation of nations and supra-national places. In S. Zenker & B. Jacobsen (Eds.), *Inter-regional place branding*. Springer. https://doi.org/10.1007/978-3-319-15329-2_3

Anholt, S. (2010). Definitions of place branding – Working towards a resolution. *Place Branding and Public Diplomacy*, *6*(1), 1–10. https://doi.org/10.1057/pb.2010.3

Ashworth, G., & Kavaratzis, M. (2009). Beyond the logo: Brand management for cities. *Journal of Brand Management*, *16*(8), 520–531. https://doi.org/10.1057/palgrave.bm.2550133

Ashworth, G. J., Kavaratzis, M., & Warnaby, G. (2015). The need to rethink place branding. In M. Kavaratzis, G. Warnaby, & G. Ashworth (Eds.), *Rethinking place branding*. Springer. https://doi.org/10.1007/978-3-319-12424-7_1

Bronzini, R., Ciani, E., & Montaruli, F. (2022). Tourism and local growth in Italy. *Regional Studies*, *56*, (1), 140–154. https://doi.org/10.1080/00343404.2021.1910649

Chang, C. C., & Chu, K. H. (2013, June 5–7). A recommender system combining social networks for tourist attractions. In *2013 fifth international conference on computational intelligence, communication systems and networks* (pp. 42–47), Madrid, Spain. IEEE. https://doi.org/10.1109/CICSYN.2013.52.

Du, J., & Tang, L. (2018). Evolution of global contribution in multi-level threshold public goods games with insurance compensation. *Journal of Statistical Mechanics: Theory and Experiment*, *2018*(1), 013403. https://doi.org/10.1088/1742-5468/aa9bb6

Einav, L., & Levin, J. (2014). Economics in the age of big data. *Science*, *346*, 6210. https://doi.org/10.1126/science.1243089

Giovanardi, M. (2015). A multi-scalar approach to place branding: The 150th anniversary of Italian unification in Turin. *European Planning Studies*, *23*(3), 597–615. https://doi.org/ 10.108009654313.2013.879851

Govers, R., & Go, F. (2009). *Place branding, glocal, virtual and physical identities, constructed, imagined and experienced*. Palgrave Macmillan. https://doi.org/10.1007/978-0-230-24702-4

Hansen, B. E. (1999). Threshold effects in non-dynamic panels: Estimation, testing, and inference. *Journal of Econometrics*, *93*(2), 345–368. https://doi.org/10.1016/S0304-4076(99)00025-1

Hansen, R. (2010). The narrative nature of place branding. *Place Branding and Public Diplomacy*, *6*(4), 268–279. https://doi.org/10.1057/pb.2010.27

Houghton, J., Siegel, M., & Goldsmith, D. (2013, July 21). Modeling the influence of narratives on collective behavior. In R. Eberlein & I. J. Martínez-Moyano (Eds.), *Proceedings of the 31st international conference of the system dynamics society*. System Dynamics Society.

Kavaratzis, M., & Kalandides, A. (2015). Rethinking the place brand: The interactive formation of place brands and the role of participatory place branding. *Environment and Planning A: Economy and Space*, *47*(6), 1368–1382. https://doi.org/10.1177/0308518X15594918

Lichrou, M., Patterson, M., Malley, L. O., & Leary, K. O. (2017). Place branding and place narratives. In A. Campelo (Ed.), *Handbook on place branding and marketing* (pp. 160–177). Edward Elgar.

Oliveira, E., & Panyik, E. (2015). Content, context and co-creation: Digital challenges in destination branding with references to Portugal as a tourist destination. *Journal of Vacation Marketing*, *21*(1), 53–74. https://doi.org/10.1177/1356766714544235

Padula, G. (2021). L'impatto Economico di Matera Capitale Europea della Cultura, Rapporto finale, Fondazione Matera-Basilicata, Cityo.

Pera, R. (2017). Empowering the new traveller: Storytelling as a co-creative behaviour in tourism. *Current Issues in Tourism*, *20*(4), 331–338. https://doi.org/10.1080/13683500.2014.982520

San Eugenio-Vela, J. D., Ginesta, X., & Kavaratzis, M. (2020). The critical role of stakeholder engagement in a place branding strategy: A case study of the Empordà brand. *European Planning Studies*, *28*(7), 1393–1412. https://doi.org/10.1080/09654313.2019.1701294

Vignoli, D., Bazzani, G., Guetto, R., Minello, A., & Pirani, E. (2020). Uncertainty and narratives of the future: A theoretical framework for contemporary fertility. 25–47. https://doi.org/10.1007/978-3-030-48519-1_3

Vosen, S., & Schmidt, T. (2011). Forecasting private consumption: Survey-based indicators vs. Google trends. *Journal of Forecasting*, *30*(6), 565–578. https://doi.org/10.1002/for.1213

Zenker, S., & Jacobsen, B. P. (2015). *Inter-regional place branding*. Springer.